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10/803,237	03/18/2004	Beat Heer	A01503	5627
Kenneth Crimaldi 7590 Rohm and Haas Company 100 Independence Mall West Philadelphia, PA 19106			EXAMINER PRYOR, ALTON NATHANIEL	
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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* BEAT HEER, GERHARD TIEDTKE  
and EILEEN FLECK WARWICK

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Appeal 2008-5396  
Application 10/803,237  
Technology Center 1600

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Decided: January 26, 2009

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Before DONALD E. ADAMS, DEMETRA J. MILLS, and FRANCISCO C.  
PRATS, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. Claims 3, 5 and 9 are indicated to contain allowable subject matter. (App. Br. 6, Ans. 2.) We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

## STATEMENT OF CASE

The following claim is representative.

1. A microbicidal composition comprising:
  - (a) at least one non-halogenated 2-alkyl-4-isothiazolin-3-one selected from substituted and unsubstituted 2-(C<sub>1</sub>-C<sub>4</sub>)alkyl-4-isothiazolin-3-ones; and
  - (b) at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone;wherein a weight ratio of said at least one non-halogenated 2-alkyl-4-isothiazolin-3-one to said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone is from 750:1 to 1: 1.
6. The composition of claim 1 in which said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone is 2-methylbenzisothiazolone and said weight ratio is from 760:1 to 2.5:1.

### *Cited References*

Yamaguchi (as translated)<sup>1</sup>      JP 2001/302418A      Oct. 31, 2001

### *Grounds of Rejection*

1. Claims 1, 6-8 and 10-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi. We select claim 1 as representative of

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<sup>1</sup> Translation dated Nov. 30, 2005.

the rejection before us since Appellants have not separately argued the claims.<sup>2</sup> 37 C.F.R. 41.37(c)(1)(vii).

## ISSUE

Appellants contend that there is evidence of unexpected results at the claimed ratio of ingredients (App. Br. 11.)

The Examiner finds that Appellants' evidence of unexpected results is not convincing (Ans. 4-5.)

The issue is whether the record reflects evidence of unexpected results at the claimed ratios.

## FINDINGS OF FACT

1. Yamaguchi teaches a composition comprising 15 parts 2-methyl-4-isothiazoline-3-one (MIT) and 20 parts 2-methyl-1,2-benzisothiazolin-3-one (MBI) which equates to a ratio of MIT:MBI being 1:1.33 (See Table 1 Example 5). (Ans. 3.)
2. Yamaguchi teaches a combination comprising 99 to 1 parts MIT and 1 to 99 parts MBI, which would fall within the instant ratio of MIT:MBI of 750:1 to 1 : 1. (Ans. 3.)
3. Yamaguchi teaches that the composition can be used in household products such as paints. (Yamaguchi translation, paragraph 1.) (Ans. 3.)

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<sup>2</sup> We acknowledge Appellants' separate category for claims 6, 7, 10 and 12 on page 11 of the Appeal Brief, however Appellants merely recite limitations of the claims and provide no argument. "A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim." 37 C.F.R. 41.37(c)(1)(vii).

4. Yamaguchi does not teach the instant ratio of MIT: MBI being 1:1. (Ans. 3.)

5. The Examiner reasons that

[i]t would have been obvious to one having ordinary skill in the art to employ the ratio (1:1) claimed by applicant . . . since it is so close to the ratio (1 : 1.33) taught by Yamaguchi. In the absence of unexpected results, one having ordinary skill in the art would have been motivated to do this because the 1:1.33 for MIT:MBI is extremely close to and rounds off to the claimed ratio of 1:1 for MIT:MBI. One would have expected data collected using both ratios to be similar due to the closeness of the claimed ratio and Yamaguchi's ratio.

(Ans. 4.)

6. Appellants point out that the instant specification discloses synergistic results for a composition comprising a non-halogenated 2-alkyl-4-isothiazolin-3-one (MIT) plus at least one of 2,2'-dithiobis(N-methylbenzamide) (DTBMA) and MBI in a ratio ranging from 750:1 to 1:1 on pages 10-21 of the instant specification. (Ans. 3-4.)

7. Yamaguchi translation, paragraph 15, states that there is a synergistic result when compounds of formula I, including 2-methyl-1,2-benzisothiazolin-3-one and formula two including 2-methyl-4-isothiazoline-3-one, are combined.

8. The Examiner finds that Yamaguchi discloses a composition comprising MIT:MBI in the ratio of 1:1.33 (see Example 5), which falls outside of the claimed ratio range. Since the ratio of 1:1.33 for MIT:MBI is extremely close to and rounds off to the claimed ratio of 1:1 for MIT:MBI, one would have expected data collected using both ratios to be similar due to the closeness of the claimed ratio and Yamaguchi's ratio. (Ans. 4.)

## PRINCIPLES OF LAW

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992). On appeal to this Board, Appellants must show that the Examiner has not sustained the required burden. *See* (1) *Ex parte Yamaguchi*, <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd074412.pdf>, slip op. at 5 and 23 (BPAI Aug. 29, 2008) (precedential); (2) *Ex parte Fu*, <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd080601.pdf>, slip op. at 5 and 20 (BPAI Mar. 31, 2008) (precedential); (3) *Ex parte Catan*, <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd070820.pdf>, slip op. at 3 and 21 (BPAI Jul. 3, 2007) (precedential), and (4) *Ex parte Smith*, <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>, slip op. at 4, 9 and 23 (BPAI Jun. 25, 2007).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007).

Synergism, in and of itself, is not conclusive of unobviousness in that synergism might be expected. *In re Kollman and Irwin*, 595 F.2d 48, 55 (CCPA 1979). Expected beneficial results are evidence of obviousness just as unexpected beneficial results are evidence of unobviousness. *See In re Skoner*, 517 F.2d 947, 950 (CCPA 1975).

## ANALYSIS

Appellants argue that Yamaguchi does not demonstrate that the combinations disclosed therein are synergistic at any ratio. (App. Br. 11.) Appellants argue that Yamaguchi teaches a ratio of 1:1.33 of MIT:MBI (Example 5) whereas the instant claims recite a ratio 750:1 to 1:1. (App. Br. 11.) Examiner argues that Yamaguchi teaches a combination comprising 99 to 1 parts MIT and 1 to 99 parts MBI, which would fall within the instant ratio of MIT:MBI of Example argues that Yamaguchi teaches a combination comprising 99 to 1 parts MIT and 1 to 99 parts MBI, which would fall within the instant ratio of MIT:MBI of 750:1 to 1 : 1.750: 1 to 1 : 1. (Ans. 4.)

Appellants argue that they have obtained unexpected synergistic interaction between MIT and MBI in the claimed range ratios and that Yamaguchi contains no data illustrating any synergistic interaction at any ratio. (App. Br. 11.)

The Examiner acknowledges applicants' data obtained from the combination of MIT:MBI in a ratio of 1: 1. (Ans. 5.) However, the Examiner reiterates that Yamaguchi discloses MIT:MBI in a ratio of 1:1.33, and argues that it would have been obvious to one having ordinary skill in the art to employ the ratio (1:1) claimed by applicant at the time of Yamaguchi's invention since it is so close to the ratio (1:1.33) taught by Yamaguchi. (Ans. 5.) The Examiner argues that one having ordinary skill in the art would have been motivated to do this because the 1:1.33 for MIT:MBI is extremely close to and rounds off to the claimed ratio of 1:1 for MIT:MBI. (Ans. 5.) The Examiner argues that one would have expected data collected using both ratios to be similar due to the closeness of the claimed ratio and Yamaguchi's ratio. (Ans. 5.)

Yamaguchi translation, paragraph 15 (page 11) indicates that there is a synergistic effect when compounds of formula I and formula II are combined together. (FF 7.) Therefore, it was known in the art at the time of the present invention that there is synergism when the two compounds claimed are combined. Synergism, in and of itself, is not conclusive of unobviousness in that synergism might be expected. *In re Kollman and Irwin*, 595 F.2d 48, 55(CCPA 1979). Expected beneficial results are evidence of obviousness just as unexpected beneficial results are evidence of unobviousness. *In re Skoner*, 517 F.2d 947, 950 (CCPA 1975).

We do not find Appellants have proffered evidence that the claimed ratios of ingredients show unexpected synergism in view of the synergism disclosed for the ratios of Yamaguchi.

#### CONCLUSION OF LAW

The Appellants have not met his burden of showing unexpected results. The obviousness rejection is affirmed.

#### SUMMARY

The obviousness rejection is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

**AFFIRMED**

Appeal 2008-2978  
Application 10/803,237

dm

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